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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/462,994	01/14/2000	UDO SCHWALKE	P99.2666	5747

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SCHIFF HARDIN & WHITE
PATENT DEPARTMENT
7100 SEARS TOWER
CHICAGO, IL 60606-6473

EXAMINER

KEBEDE, BROOK

ART UNIT

PAPER NUMBER

2823

DATE MAILED: 01/02/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/462,994

Applicant(s)

SCHWALKE ET AL.

Examiner

Brook Kebede

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 October 2001.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
2. Claims 8-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The rejection that set forth in Paper No. 6 is maintained as of record repeated herein below.

In the method claim, at least one positive (active) step must be recited in the claimed invention. Regarding claim 8, none of the claimed limitations have a positive step.

For instance, the limitation in claim 8, lines 1-10, "Method for manufacturing an integrated circuit arrangement, whereby a doped region (3) is formed in a semiconductor substrate (1); whereby a plane having conductive useful structures (71) and at least one conductive filler structure (72) is formed on the semiconductor substrate (1) by application and structuring of a conductive layer (7); whereby an insulation layer (11, 12) is produced that surrounds and covers the conductive useful structures (71) and the conductive filler structure (72); whereby a conductive connection is produced between the conductive filler structure (72) and the doped region (3)." does not provide any active element that establish the claimed invention is a method (process) claim. As best understood the recited claim limitation, in claim 8 and consecutive claims, is a product-by-process claim. As a result it is difficult for the Examiner to determine what actually applicants are intended to claim, i.e., process or product. Therefore, it renders the claim indefinite in its scope.

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Claims 9 and 10 also rejected for the same reason as described herein above and as being dependent of the rejected independent base claim.

3. Applicants' cooperation is requested in reviewing the claims structure to ensure proper claim construction and to correct any subsequently discovered instances of claim language noncompliance. See *Morton International Inc.*, 28USPQ2d 1190, 1195 (CAFC, 1993).

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

5. Claims 1-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Uehara et al. (US/5,698,902).

The rejection that set forth in Paper No. 6 is maintained as of record repeated herein below.

Re claim 1, Uehara et al. disclose an integrated circuit arrangement having at least one doped region (21 21a 21b) is provided in a semiconductor substrate (10); having a plane with conductive useful structures (50a) (i.e. a gate electrode) and at least one conductive filler structure (50b) is arranged at the surface of the semiconductor substrate (10); whereby the conductive filler structure (50b) is conductively connected to the doped region (21) (see Fig. 6).

Re claim 2, as applied to claim 1 above, Uehara et al. disclose all the claimed limitation including the limitation whereby the conductive useful structures (50a) and the conductive filler

structure (50b) exhibit essentially the same height and are surrounded by a planarizing insulation layer (32) (see Fig. 6).

Re claim 3, as applied to claim 1 or 2 above, Uehara et al. disclose all the claimed limitation including the limitation whereby the conductive filler structure (50b) is connected to the doped region (21) via a via hole and a contact (i.e. the contact used to form withdrawn electrode (31) (not labeled) (see Fig. 6).

Re claim 4 as applied to claim 3 above, Uehara et al. disclose all the claimed limitation including the limitation whereby the via hole overlaps the conductive filler structure (50b) and the doped region (21), so that the surface of the conductive filler structure (50b) and of the doped region (21) are in communication with the contact (i.e. withdrawn electrode) (31) (see Fig. 6).

Re claim 5, as applied to one of the claims 1-4 above, Uehara et al. disclose all the claimed limitation including the limitation whereby the conductive useful structures (50a) are gate electrodes and whereby the conductive filler structure (50b) contains the material of the gate electrode (see Fig. 6).

Re claim 6, as applied to one of the claims 1-5 above, Uehara et al. disclose all the claimed limitation including the limitation whereby the doped region (21) is a doped well or the semiconductor substrate (10) (see Fig. 6).

Re claim 7, as applied to on of the claims 1-6 above, Uehara et al. disclose all the claimed limitation including the limitation whereby a metallization level (34) is arranged above the plane wherein the conductive filler structure (50b) is arranged; whereby the conductive filler structure (50b) is connected to the metallization level (34) via a further contact (i.e. the contact a buried layer (33) is formed) (not labeled) (see Fig. 6)

Re claim 8, Uehara et al. disclose a method for manufacturing an integrated circuit arrangement, whereby a doped region (21) is formed in a semiconductor substrate (10); whereby a plane having conductive useful structures (50a) and at least one conductive filler structure (50b) is formed on the semiconductor substrate (10) by application and structuring of a conductive layer (15b 16b); whereby an insulation layer (32) is produced that surrounds and covers the conductive useful structures (50a) and the conductive filler structure (50b); whereby a conductive connection is produced between the conductive filler structure (50b) and the doped region (21) (see Fig. 6).

Re claim 9, as applied to claim 8 above, Uehara et al. disclose all the claimed limitations including whereby a via hole is opened in the insulation layer (32), said via hole respectively partially overlapping the conductive filler structure (50b) and the doped region (21), so that the surface of the doped region (21) and of the conductive filler structure (50b) is partially uncovered; whereby a contact (31) is formed in the via hole (not labeled), said contact being in communication with the surface of the conductive filler structure (50b) and of the doped region (21) (see Fig. 6).

Re claim 10, as applied to claim 8 or 9, Uehara et al. disclose all the claimed limitations including whereby a metallization level (34) is produced above the plane wherein the conductive filler structure (50b) is arranged; whereby a further contact (33) is produced via which the conductive filler structure is connected to the metallization level (34) (see Fig. 6).

Response to Arguments

6. The objection regarding the **Oath and Declaration** that set forth in prior Office action that mailed on July 13, 2001 in Paper No. 6 is withdrawn.

7. Applicants' arguments filed on October 18, 2001 in Paper No. have been fully considered but they are not persuasive.

Regarding the rejection under 35 USC 112, applicants are argued that "Examiner's attention is directed to Preliminary Amendment along with this application, wherein claims 1-10 as filled have been cancelled and replaced by new-claims 11-21."

In response to Applicants' contention, the Examiner respectfully submit that there is no record that shows the existence of the **Preliminary Amendment** that mentioned by applicants prior to the mailing date of the Office action that set forth in Paper No. 6 and even to this date. Furthermore, applicants fail to provide an evidence that such an amendment has been filed prior to Examination of the application based on its merit as originally filled in repose to the Office action that mailed on July 7, 2001 in Paper No. 6. If applicants have such evidence, applicants are advised to file a petition by providing the necessary evidence so that the application can be reconsidered by the Office based on the newly provided evidence. However, based on the record at hand, the rejection under 35 USC 112 is deemed proper.

Regarding the rejection under 35 USC 102, applicants argued that "applicants respectfully submit that this rejection is moot that these claims have been cancelled in favor of claims 11-21. Nevertheless, Applicants respectfully submit that Uehara, et al. fails to disclose or suggest the integrated circuit arrangement recited in claims 11-21. Thus, claims 11-21 are patentable over this reference."

In response to the applicants' argument, the Examiner respectfully submits that such an argument is not commensurate with the scope of the claims, in particularly, as stated above in Paragraph 5. As mention herein above, the record to this date shows only the existence of claims

1-10. As shown in Paragraph 5, Uehara et al. disclose all the claimed limitation. Therefore, the rejection under 35 USC 102 is deemed proper.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Correspondence

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brook Kebede whose telephone number is (703) 306-4511. The examiner can normally be reached on 8-5 Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on (703) 308-4918. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Brook Kebede

BK
December 27, 2001

L. Ph
LONG PHAM
PRIMARY EXAMINER